

ACC NR: AP6017974

SOURCE CODE: UR/0413/66/000/010/0079/0079

INVENTORS: Gul', V. Ye.; Zakharchenko, P. I.; Belyatskaya, O. N.; Gorbatova, K. A.; Gorbachev, Yu. G.

ORG: none

TITLE: A method for obtaining a film-making material. Class 39, No. 181806

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 10, 1966, 79.

TOPIC TAGS: hydrochloric acid, rubber, isoprene, polymer, sorbic acid

ABSTRACT: This Author Certificate presents a method for obtaining a film-making material by hydrochlorination of 1,4-cis-isoprene rubber. A modifier is introduced in the course of film making. To impart the preserving properties to the film and to increase its resistance to aging, sorbic acid is used as the modifier.

SUB CODE: 11/07/ SUBM DATE: 02Jan63

Card 1/1

UDC: 678.474.3.046.9:62-416

L 2985-66 EWT(m)/EPF(c)/EMP(j) RM

ACCESSION NR: AP5022615

UR/0190/65/007/009/1645/1649  
678.01:54+678.41+678.76

AUTHORS: Gorbachev, Yu. G.; Gorbatova, K. A.; Belyatskaya, O. N.; Gul', V. Ye.

TITLE: Kinetics of the hydrochlorination of natural and synthetic isoprene rubber

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 9, 1965, 1645-1649

TOPIC TAGS: natural rubber, synthetic rubber, isoprene, hydrogen chloride, chemical reaction kinetics/ SKI 3 isoprene rubber

ABSTRACT: The effects of the temperature, pressure, concentration of HCl, and structure of the rubber upon the kinetics of hydrochlorination of natural and synthetic isoprene rubber were studied. The reaction was performed by dissolving rubber in dichloroethane and treating it with a saturated solution of HCl in dioxane (ratio of solvents 4:1, respectively). It was found that the rise in reaction temperature from 0 to 20 to 40°C increases the rate rapidly, in spite of the decrease in the solubility of HCl. Trebling of the stoichiometric amount of HCl is also favorable for the reaction rate. The structure of the starting rubber determines the properties of its hydrochloride. The hydrochloride of natural

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rubber containing more than 27% of chlorine forms a good quality "pliofilm" due to the highly oriented structure of the starting rubber. The isoprene rubber SKI-3 (investigated in this work) is the first synthetic rubber which, upon conversion to its hydrochloride, is capable of forming such a film. The latter is equal to films from the natural material in its physical and mechanical properties. Orig. art. has: 1 table and 5 figures.

ASSOCIATION: Moskovskiy tekhnologicheskii institut myasnoy i molochnoy promyshlennosti (Moscow Technological Institute of Meat and Milk Industries) 44

SUBMITTED: 03Nov64

ENCL: 00

SUB CODE: MT, GC

NO REF SOV: 001

OTHER: 007

Card

2/2

GORBACHEV, Yu.I.

Experience gained in the use of TSP-59 OKS devices. Razved. i  
prom. geofiz. no.50:1:2-118 '63. (MIRA 18:3)

GORBACHEVA, A., insh.

In the Scientific Technological Society of the Construction  
Industry. Zhil.stroi. no.6:30-31 Je '60.

(MIRA 13:7)

1. Uchenyy sekretar' Tsentral'nogo pravleniya Nauchno-  
tekhnicheskogo obshchestva stroitel'noy industrii.  
(Building research)

GORBACHEVA, A., insh.

Conference on housing construction using three-dimensional  
units. Zhil. stroi. no.9:31 S '60. (MIRA 13:9)  
(Apartment houses) (Precast concrete construction)

MASHANSKIY, F.I., professor; KHARITONOVA, K.K.; GORBACHEVA, A.I.;  
MAMAYEVA, Ye.S.

Primary plastic surgery of the dura mater in experimental open  
craniocerebral trauma. Vop.neirokhir. 20 no.2:39-42 Mr-Apr '56.

(MLRA 9:7)

1. Iz Novosibirskogo instituta vosstanovitel'noy khirurgii i  
ortopedii

(DURA MATER, surg.

exper. in open brain inj.)

(BRAIN, wounds and inj.

exper., surg. of dura mater)

(WOUNDS AND INJURIES, exper.

brain, surg. of dura mater)

USSR / Human and Animal Morphology. Nervous System. S-2  
Peripheral Nervous System.

Abs Jour: Ref Zhur-Biol., No 14, 1958, 64813.

Author : Corbacheva, A.I.

Inst : Not given.

Title : Concerning the Significance of the Vascular  
Connections of the Nerve with Surrounding Tissues  
in the Process of its Regeneration.

Orig Pub: V sb: Vopr. travmatol., ortopedii i vosstanovit.  
khirurgii. 2. Novosibirsk, 1957, 231-237.

Abstract: A double section of the sciatic nerve of 40 rabbits was performed; the section so obtained, 3cm length, was joined by big sutures at the loci of the section with the remaining nerve. In some cases, in a blunt way, all ties of the nerve section with surrounding tissues were destroyed, in

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USSR / Human and Animal Morphology. Nervous System. S-2  
Peripheral Nervous System.

Abs Jour: Ref Zhur-Biol., No 14, 1958, 64813.

Abstract: other cases this was not done. Animals were driven in after 5 to 60 days, the section of the nerve was studied histologically (impregnation by the Troytski - and Bil'shovski-Gross method, with staining by the Van-Gisen process), and histo-chemically. It has been shown that in the section of the nerve in which the peripheral blood supply are preserved, regeneration of the nerve fibers proceeds more rapidly and more completely. In the case of complete devascularization of the nerve section, the process of the formation of "ovoids" is disrupted, which leads to the stoppage of the elimination of the products of decomposition, preventing the penetration of newly formed nerve fibers. In the nerve section deprived of blood supply,

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APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000516030002-4

USSR / Human and Animal Morphology. Nervous System. S-2  
Peripheral Nervous System.

Abs Jour: Ref Zhur-Biol., No 14, 1958, 64813.

Abstract: the activity of acid phosphates in the cellular elements of the endoneurium is relatively high, while in the myelin it drops rapidly; in the case of the preservation of the vascular connections of the nerve section with surrounding tissues, the reverse relationships occur. Around the nerve section deprived of vascular connections, a fibrous connective-tissue capsule is formed.

Card 3/3

~~GORBACHEVA, Anna Ivanovna~~, GORITSKIY, Aleksandr Vasil'yevich; KOZBERKO,  
Yuriy Nikolayevich; PTOVSKIY, P.A., otvetstvennyy red.; ZVORYKINA,  
L.N., red.isd-va; SABITOV, A., tekhn.red.

[Experience in drifting with a heading machine] Opyt provedeniia  
shtrekov prokhodcheskimi shchitami. Moskva, Ugletekhizdat, 1958.  
57 p. (MIRA 11:6)

(Coal mines and mining)

GORBACHEVA, A.I.; BYDEROVSKIY, S.I.; SHAPOVALOV, O.G.

Using the KS-2m shaft-sinking unit under conditions found in  
the Krivoy Rog Basin. Trudy TSNII Podzemshakhtstroia no.1:  
38-51 '62. (MIRA 16:8)

(Krivoy Rog Basin—Shaft sinking—Equipment and supplies)

GORBACHEVA, A.I.; MORDUKHOVICH, R.G.

Technical and economic indices of high-speed ventilation shaft  
sinking at the "IUzhnaia-Ventiliatsionnaia" Mine with the help  
of the KS-2m unit, Trudy TSNII Podzemshakhtstroia no.3:4-12 '64.  
(MIRA 18:9)

GORBACHEVA, A.M.; GRINZAYD, Ye.L.

Spectrum analysis of mercury of high purity. Trudy LPI  
no.201:77-83 '59. (MIRA 13:3)  
(Mercury--Spectra)

LAPUTIN, Aleksandr Yakovlevich; GORBACHEVA, A.N., red.; FELISOVA, T.D.,  
tekhn.red.

[Spin tackle fishing] Lovlia ryby spinningom. Moskva, Gos.izd-vo  
"Fiskul'tura i sport," 1960. 134 p. (MIRA 13:11)  
(Fishing)

ABROSIMOV, Andrey Alekseyevich; TARBOV, Aleksandr Alekseyevich; GORBACHEVA,  
A.N., red.; MANINA, M.P., tekhn. red.

[The "Kovrovets-175" motorcycles] Mototsikl "Kovrovets-175." Moskva,  
Gos. izd-vo "Fizkul'tura i sport," 1961. 126 p. (MIRA 14:7)  
(Motorcycles)

KOZLOV, Boris Georgiyevich; GORBACHEVA, A.N., red.; SHEKTOROVA, Ye.I.,  
tekhn. red.

[Travel on a motorcycle] Puteshestviia na mototsikle. Moskva,  
Gos. izd-vo "Fizkul'tura i sport," 1961. 135 p. (MIRA 14:7)  
(Motorcycles)



1ST AND 2ND COLUMNS												3RD AND 4TH COLUMNS											
PROCESSING AND PROPERTIES INDEX																							
<div style="float: left; width: 100px; height: 100px; border: 1px solid black; display: flex; align-items: center; justify-content: center; font-size: 2em;">CA</div> <div style="float: right; width: 100px; height: 100px; border: 1px solid black; display: flex; align-items: center; justify-content: center; font-size: 2em;">12</div>												<p>Determination of active pepsin and abomasum powder by means of a solution of dry milk. G. Imkhov, A. Gorbacheva and G. Lavrova. <i>Myslennaya Ind.</i> 1939, No. 11-12, 41-2; <i>Khim. Referat. Zhur.</i> 1940, No. 6, 130. The activity of pepsin and abomasum enzymes is best detd. with a 12% soln. of dry defatted milk. Milk dissolves best in water at 45 °C°. Keeping the soln. at room temp. longer than 3 hrs. changes its physical state and accelerates the coagulation of proteins; it can be kept for about 1 day at 12°. Make the detn. as described in G. A. 34, 5152°.</p> <p style="text-align: right;">W. R. Henn</p>											
<div style="display: flex; justify-content: space-between;"> <div> <p>ASB.SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>FROM SYMBLATH</p> </div> <div> <p>FROM BOMLIV</p> <p>FROM LIT ONE ONE</p> </div> </div>																							
<p>GROUPS</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100</p>												<p>GROUPS</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100</p>											

1ST AND 2ND CROSS		3RD AND 4TH CROSS	
PROCESS AND PROPERTIES INDEX			
<p><i>Ca</i></p> <p>12</p> <p>A new method for determination of casein. A. P. Gorbacheva. <i>Proc. Lenin Acad. Agr. Sci., U. S. S. R.</i> 1960, 42-5; <i>Dairy Sci. Abstracts</i> 2, 181(1960). The gravimetric, Kjeldahl and Salvijh methods for the detn. of casein were compared on a small number of milks and gave results in fair agreement. The Salvijh method, a modification of that of Perov (C. A. 29, 6612*), is described in detail; it is a titration method which seems to offer little advantage over better-known techniques. 11 references. C. L. B.</p>			
METALLURGICAL LITERATURE CLASSIFICATION			
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1ST AND 2ND CROSS		3RD AND 4TH CROSS	

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C A		12	
<p>Simple method of casein determination in cow milk and regeneration of the solvent. A. P. Gorbacheva. <i>Moloch-naya Prom.</i> 7, No. 6, 10-11 (1960); <i>Chem. Zvez.</i> 1961, 1, 1259; cf. C. A. 56, 33457.—DM. 5 ml. of milk with 50 ml. of water, add 0.2-0.25 ml. of 10% <math>\text{CH}_3\text{COOH}</math>. Keep for 3-5 min. and filter. The filtrate will be clear, if neither too much nor too little <math>\text{CH}_3\text{COOH}</math> was used. Wash 3 times each time with 3-4 ml. distd. <math>\text{H}_2\text{O}</math>. Dissolve the residue gradually with a total of 30 ml. of 5% Na salicylate soln. at 60-70°. Heat for 5 min. on a water bath at 35-40°. and titrate with 0.02 N NaOH to phenolphthalein; the titration can also be done with 0.1 N NaOH, but it is less accurate. The accuracy of this casein detn. corresponds to the gravimetric method; the results in both cases are 0.01-0.1% higher than by the Kjeldahl method. To regenerate the salicylate soln., evap., add 10% HCl, filter, wash the ppt. thoroughly with water and dry. When large quantities of soln. are used the recovery is up to 90%. M. 160-4h</p>			
<p>ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>			
FROM LITERATURE		FROM JOURNAL	
LITERATURE		JOURNAL	

CA 12

Galvanometric determination of acidity in colored solutions. A. Gurbacheva. *Mysnaya i Molochnaya Prom.* 1945, No. 8, 62-3. — An improvised electrometric titrator is made from an inverted  $\text{CaCl}_2$  tube, the stem of which is closed with a plug of agar soln. in satd. KCl and covered with a glass bead, above which is placed a 0.04 M soln. of dibasic Na or K phosphate in satd. KCl; the electrodes are small Pt plates. With quinhydrone, satisfactory titrations on colored milk products can be made with this app. and a sensitive galvanometer. O. M. Kosolapoff

ASB:SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDER																										3RD AND 4TH ORDER																																																																																																																																	
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<div style="display: flex; justify-content: space-between;"> <span>CA</span> <span>12</span> </div> <p>Rapid determination of protein in the albumin fraction of milk. A. Gorbacheva. <i>Mysnoye i Molochnoye Prom.</i> 1948, No. 6, 61-6. Milk is diltd. with 5 vols. of H<sub>2</sub>O and freed of casein by 10% AcOH; the filtrate (40-5 cc.) is treated with 1 cc. 10% NaOH and kept for 5-10 min. at 70-8° until its color matches that of a 2% K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> soln. After cooling, the protein of the albumin fraction is pptd. by 10% AcOH, filtered, washed with H<sub>2</sub>O, and dissolved in 20 cc. of 5% Na salicylate; the soln. is then titrated with 0.2 N NaOH; it is assumed that 0.1 g. of protein requires 4.1 cc. of 0.2 N NaOH. The standard milk sample used is 5 cc. G. M. Kosolupoff</p>																																																																																																																																																											
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GORBACHEVA, A. P.

USSR/Medicine - Milk  
Medicine - Albumin

Jun 48

"A Method in Determining Casein and Albumin in  
Cow's Milk," A. P. Gorbacheva, Cand Biol  
Sci, 3 pp

"Dok v-s Ak Selkhoz Nauk" No 6

Biochemical characteristics of milk are important  
in selecting good cows. Presents rapid and  
simple method to determine casein and albumin  
in cow's milk. Consists of two steps: (1) In  
the preliminary reaction casein is isolated.  
(2) Filtrate is washed in alkali, and albumin

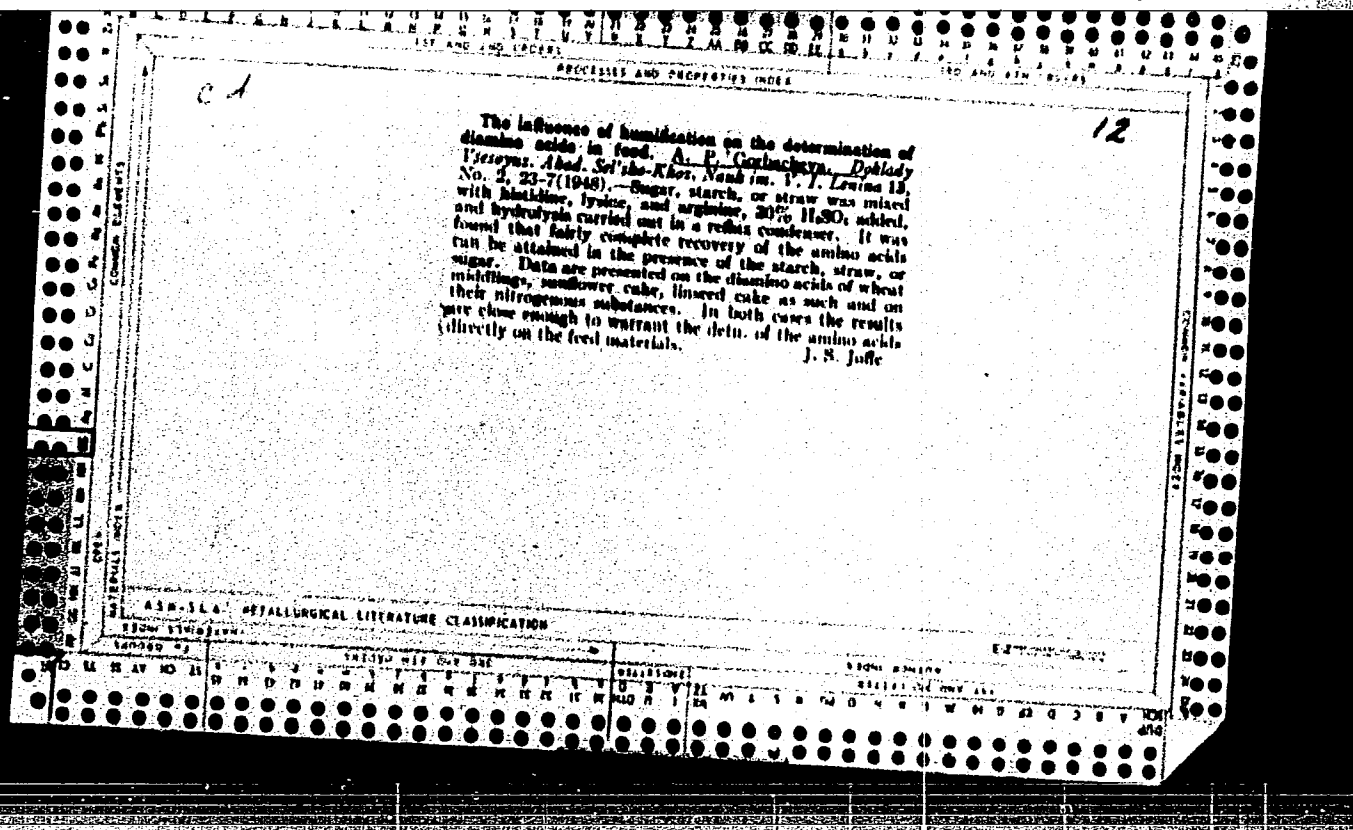
33/4975

USSR/Medicine - Milk (Contd)

Jun 48

Fraction is isolated. Describes method and test  
results. Submitted 13 Mar 48.

33/4975





1ST AND 2ND ORDERS		3RD AND 4TH ORDERS	
PROCESSING AND PROPERTY INDEX			
C A		12	
<p>A method of determining casein and albumin in cow milk. A. P. Gorbacheva. <i>Doklady Vsesoyuz. Akad. Nauk SSSR</i> 13, No. 6, 37-9, (1948). See C.A. 42, 204c. J. S. Joffe</p>			
ASB-11A METALLURGICAL LITERATURE CLASSIFICATION			
1ST ORDER		2ND ORDER	
3RD ORDER		4TH ORDER	

CA

12

The determination of diamine acids and histidine in  
food. A. P. Gorbachev. *Doklady Vsesoyuz. Akad.  
Nauk SSSR, Russian. V. 1, London 14, No. 9, 31-34 (1940);  
cf. C.A. 43, 6671c.*—Data are presented on the use of elec-  
trolysis in detg. the amino acids in different feeds and  
animal and vegetable products. J. S. Joffe

All-Union Sci. Res. Inst. of Animal Husbandry

GORBACHEVA, A. P.

25853. GORBACHEVA, A. P. k opredeleniya diaminokislot v normakh. Trudy Vsesoyuz. nauch.-issled. in-ta zhivotnovodstva, t. XVII, 1949, S. 156-64- Bibliogr: 12 nazv.

So. Letopis' Zhurnal'nykh Statey, Vol. 34, Moskva, 1949

CA

Nitrogenous substances of blood as precursors of the nitrogenous substances of milk. *A. B. Goshubina*. Doklady Vsesoyuz. Akad. Nauk SSSR. Nauk. im. V. I. Lenin 18, No. 4, 7-13(1950).—Blood was taken from the milk vein and vein jugularis of cows 2-3 hrs. after the morning milking. Two samples were taken; 1, while the cows were on pasture (July), and 2, while in the barn (April). Data were made on the N substances of the whole blood and separately of the blood serum. Amino acids, fats, and total solids were detd. on the whole blood only. During the two time-periods of blood taking, the blood of the juglar vein contained more dry matter than that of the milk vein. Both sources of blood have shown a decrease in polypeptide N during pasture feeding. There was a difference in the polypeptide N content of the two types of blood during barn feeding. It was found that blood serum is more const. in its N content than the whole blood. The milk plasma contains more of the N substances of whole blood than of the serum. In the metabolic processes the erythrocytes play an important part in the milk gland. Blood serum is more const. in compn. than whole blood. The ratio of amino-acid N to dicarboxylic acid N in the blood of the milk-vein and jugular vein is greater than in milk. J. S. Joffe

117

The digestibility of nitrogenous substances and diamine acids in the rations for cows and their utilization in the synthesis of milk. *Acad. Sci. USSR, Doklady Vsesoyuz. Akad. Sci. USSR, Nauka im. V. I. Lenina*, 15, No. 9, 42-8 (1950). In a physiol. study on the digestibility of histidine, arginine, and lysine by cows, the coeff. of digestibility of histidine and arginine is higher than that of lysine. Heavy milkers utilize not only lysine but also histidine and arginine. J. S. Joffe

1951

5

1. GORBACHEVA, A. P.
2. USSR (600)
4. Metabolism; Cows
7. Nitrogen and amino-acid metabolism in cows during the pasture season. Sov. zootekh., 7, No. 4, 1952.  
Kandidat Biologicheskikh Nauk
9. Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified.

GORBACHEVA, A.P.; RZHEVSKAYA, T.K.

Methods of studying cow urine. Doklady Vsesoyuz. Akad. Sel'skokhoz. Nauk  
im. V.I.Lenina 18, No.3, 23-30 '53. (MLBA 6:4)  
(CA 47 no.22:12483 '53)

GORBACHEVA, A.P.

[Methods of urine analysis for farm animals] Metodiki analiza mochi sel'skokhoziaistvennykh shivotnykh. Moskva, Vses. nauchno-issledovatel'skii institut shivotnovodstva, 1955. 34 p. (MLRA 10:3)  
(Urine--Analysis and pathology)



GORBACHEVA, A.P.

[Methods of detecting histidine, arginin and lysin in feeding stuffs] Metodiki opredeleniia gistidina, agrinina i lisina v kormakh. Moskva, Vses. nauchno-issledovatel'skii institut sivotnovodstva. 1956. 21 p. (Feeding and feeding stuffs--Analysis)

(MLRA 10:3)

Gorbacheva, A.P.

Changes in the composition of the nitrogenous (protein) substances of green fodder. A. P. Gorbacheva. Doklady Vsesoyuz. Akad. Sel'skokhoz. Nauk, 1950, No. 5, 20-6 (1950). — Histidine, arginine, lysine, dicarboxylic amino acids, and others decline strongly in quantity with the aging of the plants. Legumes contain the highest amount of the more valuable nutrients during the blooming period. I. S. Ioffe

All-Union Inst Cattle Breeding

USSR/Farm Animals- General Problems.

Abs Jour : Ref Zhur - Biol., No 15, 1958, 69219  
Author : Gorbacheva, A.P., Razmologova, A.M., Rubinova, S.S.  
Inst : All-Union Scientific Research Institute of Animal Husbandry  
Title : Chemical Composition and Nutritiousness of Green Corn  
Orig Pub : Byul. nauchno-tekhn. inform. Vses. n.-i. in-t zhivotnovodstva, 1957, No 1 (3), 13-19  
Abstract : Data regarding Voronezhskaya 76, Vir 42 and Gibril kollektivnyy varieties of corn are given.

Card 1/1

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000516030002-4"

USSR/Cultivated Plants - Grains.

M

Abs Jour : Ref Zhur Biol., No 18, 1958, 82311  
Author : Gorbacheva, A.P., Rubinova, S.S.  
Inst : All-Union Scientific Research Institute of Animal Husbandry  
Title : Composition of Mineral Substances in Corn During Different Phases of Its Vegetation  
Orig Pub : Byul. nauchno-tekhn. inform. Vses. n.-i. in-t zhivotnovodstva, 1957, No 2(4), 36-39  
Abstract : The mineral matter content was relatively decreasing in relation to the increase in the amount of organic matter in proportion to the ripening of the fast maturing Voronezhskaya 76 and late maturing VIR 42 varieties of corn. Data is cited on the mineral matter content in the green bulk of red clover, alfalfa and oats.

Card 1/1

GORBACHEVA, A.P., kandidat biologicheskikh nauk.

Amino acid content of green corn during the growing period. Dokl.  
Akad. sel'khoz. 22 no.7:3-10 '57. (MIRA 10:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhivotnovodstva.  
Predstavleno akademikom S.S. Perovym.  
(Amino acids) (Corn (Maize))

COUNTRY : USSR M  
 CATEGORY : Cultivated Plants. Cereals.  
 ABS. JOUR. : RZhBiol., No. 1958, No. 104640  
 AUTHOR : Gorbacheva, A. P., Rubinova, S. S.  
 INST. : All-Union Academy of Agricultural Sciences imeni Lenin  
 TITLE : Mineral Matter in Corn at Different Stages of Its Vegetation.  
 ORIG. PUB. : Dokl. VASKhNIL, 1958, No. 2, 16-22  
 ABSTRACT : Data on the composition of mineral matter in corn of two varieties: early maturing variety Voronszhskaya 76 and late maturing VIR 42, raised on the plot of grain crops at the All-Union Agricultural Exposition in 1955. With ripening, the mineral content decreases both in the whole plant and in the ears. The ears contain little Ca; the ratio of Ca to P in them is low. The mineral composition of the stems and leaves changes little at different stages; the ratio of Ca to P in them is higher than in the

CARD: 1/2

26

CATEGORY :  
 ABS. JOUR. : RZhBiol., No. 1958, No. 104640  
 AUTHOR :  
 INST. :  
 TITLE :  
 ORIG. PUB. :  
 ABSTRACT : ears. Accumulation of mineral matter in the plant continues until maturity. Corn contains more Ca, P, and Fe than other grain crops; the ratio of Ca to P in corn is higher than in other crops. --Ye. I. Saks

CARD: 2/2

GORBACHEVA, A.P., kand. biol. nauk

Alcohol-soluble proteins in green corn. Dokl. Akad. sel'khoz.  
23 no. 11:9-16 '58. (MIRA 11:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhivotnovodstva.  
Predstavlena akademikom I.I. Sanylovym.  
(Corn (Maize)) (Proteins)

GORBACHEVA, A.P., kand.biolog.nauk; RUBINOVA, S.S.

Mineral substances of grain in various corn varieties and in different agricultural zones of the U.S.S.R. Dokl.Akad.sel'khoz. 24 no.8:20-26 '59. (MIRA 12:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhivotnovodstva. Predstavlena chlenom-korrespondentom Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina M.F.Tommo. (Corn(Maize)--Varieties) (Plants--Assimilation)

GORBACHOVA, A.P., kand.biolog.nauk

Oil and fat content of corn seeds in various zones of the  
U.S.S.R. Dokl.Akad.sel'khoz. 24: no.12:9-12 '59.

(MIRA 13:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut shivotnovodstva.  
Predstavlena chlenom-korrespondentom Vsesoyuznoy akademii sel'-  
skokhozyaystvennykh nauk im. V.I.Lenina (VASKHNIK) M.F.Torpe.  
(Corn(Maise))



MININ, A.N., kand. tekhn. nauk; GORBACHEVA, A.P.

Effect of the size of filler particles on the characteristics  
of composition lignum plastics. Der. prom. 13 no.12:12-14  
D '64 (MIRA 18:2)

1. Belorusskiy tekhnologicheskii institut.

KOVALEV, Ye.R.; FONAREVA, T.A.; GORBA-NEVA, A.I.

Two rare forms of hemolytic anemia in children. Vop. genet.  
v pediatrii, no.3:214-223 '64. (MIRA 18:7)

AUTHOR: Gorbacheva, F.Ye., Physician SOV-25-58-8-54/61  
TITLE: Treatment of Epilepsy (Lecheniye epilepsii)  
PERIODICAL: Nauka i zhizn', 1958, Nr 8, pp 77-78 (USSR)  
ABSTRACT: The article contains answers to reader's questions on modern methods of treating epilepsy. The author points to the recently synthesized anti-convulsion preparation "Hexamidin" (Geksamidin), analogous to the American "Maysolin", and to "Chloracon" (Khlorakon) a new anti-convulsion medicine now undergoing clinical tests.  
ASSOCIATION: Klinika nervnykh bolezney pri 1-m Moskovskom meditsinskom institute (Clinic for Nervous Diseases Attached to the First Medical Institute, Moscow)  
1. Epilepsy--Therapy

Card 1/1

MEL'NIKOV, S.A.; GORBACHEVA, F.Ye.

Early diagnosis and treatment of progressive muscular dystrophy  
in children. Sov. med. 25 no.11:138-140 N '61. (MIRA 15:5)

1. Iz detskogo otdeleniya kliniki nervnykh bolezney (zav. -  
prof. V.V.Mikheyev) I Moskovskogo ordena Lenina meditsinskogo instituta  
imeni Sechenova.

(MUSCULAR DYSTROPHY)

MEL'NIKOV, S.A.; GORBACHEVA, F.Ye.; SOSNOVSKAYA, L.S.

Some developmental characteristics of myopathies in children.  
Zhur. nevr. i psikh. 61 no.7:1024-1029 '61. (MIRA 15:6)

1. Detskoye otdeleniye kliniki nervnykh bolezney (zav.  
kafedroy - prof. V.V. Mikhayev) I Moskovskogo ordena Lenina  
meditsinskogo instituta imeni Sechenova.

(MUSCLES--DISEASES)

(MUSCULAR DYSTROPHY)

MEL'NIKOV, S.A.; GORBACHEVA, F.Ye.

Clinical characteristics of Werdnig-Hoffmann's spinal atrophy. Trudy 1-go MMI 24:177-185 '63 (MIRA 17:3)

MAL'NIKOV, S.A.; GORBACHEVA, F.Ye.; YAMSHCHIKOVA, N.A.

Use of exercise therapy in progressive muscular dystrophy.  
Trudy 1-go MMI 24:203-212 '63 (MIRA 17:3)

GORBACHEVA, F.Ye. (Moskva)

Changes in the cardiovascular system in myopathy. Klin. med.  
41 no.9:110-113 S'63 (MIRA 17:3)

1. Iz kliniki nervnykh bolezney (zav. - prof. V.V. Mikheyev,  
rukovoditel' raboty S.A. Mel'nikov) I Moskovskogo ordena Lenina  
meditsinskogo instituta imeni Sechenova.



GORBACHEVA, F.Ya.

Aldolase activity in a myopathy in children. Zhur. nevr. i  
psikh. 63 no.7:958-960 '63. (MIRA 17:7)

1. Klinika nervnykh bolezney (zav. -- prof. V.V. Mikheyev)  
I Moskovskogo ordena Lenina meditsinskogo instituta. Rukovo-  
ditel' raboty S.A. Mel'nikov.

MEL'NIKOV, S.A.; GORBACHEVA, F.Ye.

Clinical characteristics of the Ehlers-Danlos syndrome.  
Vest. dermat. i ven. no.1:83-85 '65. (MIRA 18:10)

1. Klinika nervnykh bolezney (zav. kafedroy - prof. V.V. Mikhayev) i Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova.

MEL'NIKOV, S.A., dotsent; GORBACHEVA, F.Ye., assistant

Kyphoscolioses in diseases of the spinal cord in children. Trudy 1-go  
MMI 38:382-385 '65. (MIRA 18:10)

GORBACHEVA, F.Ye., assistant

Congenital arthrogryposis of the spine. Trudy 1-go MMI 38:377-381 '65.  
(MIRA 18:10)

MEL'NIKOV, S.A.; GORBACHEVA, F.Ye.

Oppenheim's congenital myatonia. Zhur. nevr. i psikh. 65 no.7:  
1009-1012 '65. (MIRA 18:7)

1. Kafedra nervnykh bolezney (zav. - prof. V.V.Mikheyev) I Moskovskogo  
ordena Lenina meditsinskogo instituta.

GORBACHEVA, F.Ye.

Congenital arthrogryposis. Zhur. nevr. i psikh. 65 no.9:1320-  
1324 '65. (MIRA 18:9)

1. Kafedra nervnykh bolezney (zaveduyushchiy - prof. V.V. Mikheyev)  
I Moskovskogo ordena Lenina meditsinskogo instituta im. Sechenova.

*Gorbacheva, G.B.*

DEBORIN, G. A.; ~~GORBACHEVA~~, G.B.

Studies on surface films of ferments absorbing hydrophobic substances. Doklady Akad. nauk SSSR 85 no. 4:843-846 1 Aug. 1952.

(CIMI 23:3)

1. Presented by Academician A. I. Oparin 7 June 1952. 2. Institute of Biochemistry imeni A. N. Bakh, Academy of Sciences USSR.

SEMIKHATOVA, O.A.; SAAKOV, V.S.; GORBACHEVA, G.I.

Studying the after effect of temperature on the intensity and  
dynamics of photosynthesis in *Polygonum sachalinense*. Trudy  
Bot. inst. Ser. 4 no.15:25-42 '62. (MIRA 15:7)  
(Photosynthesis) (Plants, Effect of temperature on)



GORBACHEVA, I.

Information work is not simple. Grazhd. av. no.3:6 Mr '61.  
(MIRA 14:3)

1. Sotrudnitsa spravochnogo byuro, Leningradskiy aeroport.  
(Leningrad ~~airports~~ Management)

NIKOLAYEVA, N.M.; PTITSYN, B.V. [deceased]; GORBACHEVA, I.I.

Hydrolysis of potassium chloroplatinite. Zhur. neorg. khim.  
10 no.5:1051-1057 My '65. (MIRA 18:6)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya  
AN SSSR.

1ST AND 2ND CODES

PROCESSING AND DOCUMENTATION

10

CA

Decommitting eyes. 1. Synthesis of pink crystal yellow. M. A. Atabekova, I. N. Gorbacheva and I. I. Levkov. *Antineoplastic Agents*, 1968, 12(1034).--The com. pink crystal yellow (AGFA), m. 247-8°, recrystd. from alc., m. 240-0°, and analyzed for 6-ethoxy-1-methyl-2-(m-nitroxy)quinolinium methosulfate (I). I, m. 230-0°, was prepd. in 2.5 g. yield by dissolving 1.87 g. 6-ethoxyquinoline (II), m. 71-2°, in 1.20 g. MeSO<sub>2</sub>, filtering off the 2,6-Me<sub>2</sub>(H<sub>2</sub>O)C<sub>10</sub>H<sub>7</sub>NMe(O<sub>2</sub>Me) (III), m. 61, boiling it in 10 cc. of alc. with 1.51 g. of m-nitrobenzaldehyde (IV) and 0.08 g. piperidine for 40 min., cooling and filtering (cf. Ger. pat. 308,402 and 404,001, C. A. 28, 678). C<sub>18</sub>H<sub>17</sub>N<sub>2</sub>O<sub>4</sub> (H<sub>2</sub>O)C<sub>10</sub>H<sub>7</sub>NMe, m. 213-14°, was obtained in 100% yield by boiling 1.12 g. III in 50 cc. alc. with 0.8 g. KI in 3 cc. H<sub>2</sub>O, cooling, filtering and washing with H<sub>2</sub>O. The bromide, m. 211-2°, was similarly obtained with KBr. Chloride, m. 220-1°. Nitrate deriv., m. 218-19°. C<sub>18</sub>H<sub>17</sub>N<sub>2</sub>O<sub>4</sub> (H<sub>2</sub>O)C<sub>10</sub>H<sub>7</sub>NMe. Nitrate deriv., m. 200-1°, was prepd. by re-fusing 1.87 g. II and p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>Me at 140-50° for 6 hrs. and condensing with 1.51 g. m-nitrobenzaldehyde in 10 cc. alc. and 0.08 g. C<sub>10</sub>H<sub>7</sub>N. The results of the decommitting tests with these compds. are tabulated and discussed. Chas. Blanc

4th-11A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND CODES

3RD AND 4TH CODES

5TH AND 6TH CODES

7TH AND 8TH CODES

9TH AND 10TH CODES

11TH AND 12TH CODES

13TH AND 14TH CODES

15TH AND 16TH CODES

17TH AND 18TH CODES

19TH AND 20TH CODES

21ST AND 22ND CODES

23RD AND 24TH CODES

25TH AND 26TH CODES

27TH AND 28TH CODES

29TH AND 30TH CODES

31ST AND 32ND CODES

33RD AND 34TH CODES

35TH AND 36TH CODES

37TH AND 38TH CODES

39TH AND 40TH CODES

41ST AND 42ND CODES

43RD AND 44TH CODES

45TH AND 46TH CODES

47TH AND 48TH CODES

49TH AND 50TH CODES

51ST AND 52ND CODES

53RD AND 54TH CODES

55TH AND 56TH CODES

57TH AND 58TH CODES

59TH AND 60TH CODES

61ST AND 62ND CODES

63RD AND 64TH CODES

65TH AND 66TH CODES

67TH AND 68TH CODES

69TH AND 70TH CODES

71ST AND 72ND CODES

73RD AND 74TH CODES

75TH AND 76TH CODES

77TH AND 78TH CODES

79TH AND 80TH CODES

81ST AND 82ND CODES

83RD AND 84TH CODES

85TH AND 86TH CODES

87TH AND 88TH CODES

89TH AND 90TH CODES

91ST AND 92ND CODES

93RD AND 94TH CODES

95TH AND 96TH CODES

97TH AND 98TH CODES

99TH AND 100TH CODES

10

10

Structure and properties of Pinacryptol green. I. N. Gayburov and I. I. Levkov. *Photo-Kim Chem. Zashch.* (U. S. S. R.) 1988, No. 1, No. 63. --Pinacryptol green is 1,3-diaminophenyl-4-phenazonium chloride, which is produced by the reaction of chloroacetic acid with  $\alpha$ - $\text{H}_2\text{NCH}_2\text{NH}_2$  and reduction of the product with  $\text{SnCl}_2$ . C. E. K. Mees

ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION

62

1ST AND 2ND LOGS										100 AND 4TH LOGS									
PROCESSING AND PROPERTY INDEX																			
<p>CA</p> <p>The desensitizing properties of some flavindulines. I. N. Gorbachyov and I. I. Levkoy. <i>Kinofotokhim. Prom.</i> 1939, No. 2, 43-4; <i>Khim. Referat. Zhur.</i> 1939, No. 9, 115-16. The desensitizing properties of 2-amino-flavinduline and of its derivs. (which were proposed as desensitizers for the Ag halide layers by Homolka, C. A. 10, 3437) were investigated. 2-Aminodavinduline chloride possesses greater desensitizing properties than durs pinacryptol green (cf. C. A. 20, 3227), but it is practically unsuitable as a desensitizer owing to its considerable fogging properties. Flavinduline chloride and 2-nitroflavinduline chloride are inferior in desensitizing properties to 2-amindavinduline chloride. They also have a fogging effect (especially the nitro deriv.).</p> <p>W. R. Henn</p>																			
<p>ASD-3LA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
FROM 1ST LOG										FROM 4TH LOG									
1st LOG										4th LOG									

LEVKOYEV, I.I.; SVESHNIKOV, N.N.; GORBACHEVA, I.N.; VOMPE, A.F.

Optical properties of some thiocarbocyanines with substitutes in heterocyclic radicals. Trudy NIKFI no.7:25-33 '47. (MIRA 11:6)

1. Sinteticheskaya laboratoriya Nauchno-issledovatel'skogo kino-foto-instituta, Moskva.

(Thiocarbocyanine--Optical properties)

Preparation of poly- $\beta$ -amino acids. I. N. Gorbacheva, Z. A. Rogovin, and T. G. Marchenko (Moscow Textile Inst.). *Doklady Akad. Nauk S.S.S.R.* 71, 201-2 (1930). Heating  $H_2NCH_2CH_2COOH$  in a dry N stream to 200° over 48 hrs. resulted in evolution of  $H_2O$  and only 10.0% of the  $NH_2$  expected from the "classical" deamination of a  $\beta$ -amino acids. Extn. of the glassy residue with hot abs. EtOH and with  $H_2O$  gave a colorless insol. solid (sol. only

in 30% HCl and  $H_2SO_4$ ), m. above 300° (decomp.), and having 10.21% N. The analysis and the high viscosity of its solns. indicate this is a polymer of the amino acid, confirmed by hydrolysis with 25%  $H_2SO_4$  to  $\beta$ -alanine; some 45.0% of this polymer is obtained. The EtOH ext. gave 10% of an unidentifiable hygroscopic product, while the aq. ext. gave 44% (on the original wt.) of a colorless powder, decomp. 300° (on above), contg. little amino-N, 16.6% total N, and 4.67%  $CO_2H$  groups. This appears to be an interpolymer of acrylic acid and  $\beta$ -alanine; its hydrolysis gave some  $\beta$ -alanine and a semiliquid acid contg. 16%  $CO_2H$  groups. G. M. Kosolapoff

GORBACHEVA, I. N.

USSR/Chemistry - Synthesis

Card 1/1 Pub. 151 - 19/38

Authors : Levkoev, I. I.; Sveshnikov, N. N.; Gorbacheva, I. N.; Barvyn, N. S.; and Krasnova, T. V.

Title : Certain benzthiazole derivatives. Part 5.- Synthesis of 5-substituted 6-dimethylamino-2-methylbenzthiazoles

Periodical : Zhur. ob. khim. 24/2, 280-291, Feb 1954

Abstract : The reaction of oxidation with potassium bichromate of various 2-substituted 4-aminomethyl- and dimethylanilines in the presence of sodium thiosulfate was investigated. The synthesis of homologous thiosulfonic acids is described. A new general method for the conversion of p-phenylene diamino thiosulfonic acids into 6-amino-derivatives of methylbenzthiazole, is introduced. The conditions most favorable for the synthesis of 5-substituted 6-dimethylamino-2-methylbenzthiazoles, as well as homologous 6-amino- and 6-methylamino-5-methoxy-derivatives, are discussed. Twenty references: 3-USA; 3-French; 5-USSR; 1-Scandinavian and 8-German (1889-1953).

Institution : Scientific Research Motion Picture and Photo-Institute

Submitted : August 20, 1953



GORBACHEVA, I. N.

✓ Synthetic studies in the area of magnolins alkaloid.  
I. N. Gorbacheva, R. N. Tsvetkov, L. P. Varnakova, A. I. Gaidukova, and N. A. Petrovskiy (Inst. Fine Chem. Technol., Moscow). *Zhur. Obshch. Khim.* 25, 1423-7 (1955).—Keeping 3-methoxymethyl-4'-carbomethoxymethylidiphenylether in 25% HBr-AcOH 3 days gave 90% 3-bromomethyl-4'-carboxymethylidiphenyl ether, m. 107-9° (from EtOH); with  $\text{CH}_3\text{N}$ , this gave the 4-carbomethoxy analog, 80%, b. 180-90°, which refluxed 2 hrs. with NaCN in MePh gave 70% 3-cyanomethyl-4'-carbomethoxymethylidiphenyl ether, m. 45-6° (from MeOH); the 4'-carboxy analog, m. 74-6° (from  $\text{CCl}_4$ ), formed in 73% yield from the Br analog and NaCN. Sapon. with aq. alc. NaOH gave 3,4'-bis(carboxymethyl)diphenyl ether, m. 102-4°, which treated with excess  $\text{SOCl}_2$  and the resulting crude product treated with  $\beta$ -(3-methoxy-4-benzyloxyphenyl)ethylamine in  $\text{CHCl}_3$  in the presence of 5% KOH gave 65.4% bis[ $\beta$ -(3-methoxy-4-benzyloxyphenyl)ethylamide] of 3,3'-bis(carboxymethyl)diphenyl ether, m. 125-6° (from EtOH). This (1.15 g.) suspended in MePh and treated with 3 ml.  $\text{POCl}_3$  and refluxed 1.5 hrs. gave 3,3'-bis(6-methoxy-7-benzyloxy-3,4-dihydro-1-isquinolylmethyl)diphenyl ether, isolated as di-HCl salt, m. 139-42° (from EtOH); *picrate*, m. 206-7°. Also in *J. Gen. Chem. U.S.S.R.* 25, 1369-71(1955)(Engl. translation).

G. M. K.

GORBACHEVA, I. N.

Synthesis of substituted diphenyl ethers. I. N. Gorbacheva, B. N. Tsvetkov, L. P. Varnakova, K. M. Lopyrev, and N. A. Prokhorovskii (Leningrad Fine Chem. Technol. Inst., Moscow). *Zhur. Obshch. Khim.* 25, 2300-4 (1955). Slow addn. of 60 ml.  $\text{Me}_2\text{SO}$  and 60 ml. 10N  $\text{NaOH}$  to 60 g.  $m\text{-O}_2\text{NC}_6\text{H}_4\text{CH}_2\text{OH}$  at  $40^\circ$  gave 80%  $m\text{-O}_2\text{NC}_6\text{H}_4\text{CH}_2\text{OMe}$ , b.  $126\text{--}30^\circ$ , and a residue of  $(p\text{-O}_2\text{NC}_6\text{H}_4\text{CH}_2)_2\text{O}$ , m.  $100\text{--}2^\circ$ . Reduction with  $\text{Zn-HCl}$  in  $\text{MeOH}$  gave  $m\text{-H}_2\text{NC}_6\text{H}_4\text{CH}_2\text{OMe}$ , 80%, b.  $116\text{--}18^\circ$ , d.  $1.067$ ,  $n_D^{20}$   $1.5635$ ; the same form on hydrogenation of the nitro deriv. over  $\text{Ni}$  at 65 atm. at room temp. Diazotization in 30%  $\text{H}_2\text{SO}_4$  with  $\text{NaNO}_2$  and heating with much 30%  $\text{H}_2\text{SO}_4$  gave 60%  $m\text{-HOOC}_6\text{H}_4\text{CH}_2\text{OMe}$ , b.  $119\text{--}20^\circ$ , d.  $1.108$ ,  $n_D^{20}$   $1.5400$ . Addn. of 13 g.  $4,3\text{-Br}(\text{O}_2\text{N})\text{C}_6\text{H}_3\text{CO}_2\text{H}$  (Ia) to 130 ml. fuming  $\text{HNO}_3$ , then heating 1 hr. on a steam bath gave 65%  $5\text{-O}_2\text{N}$  deriv. (I), m.  $102\text{--}3^\circ$ , the same being formed on nitration of  $p\text{-BrC}_6\text{H}_4\text{CH}_2\text{CO}_2\text{H}$ . Refluxing Ia with  $\text{EtOH}$  in  $\text{C}_6\text{H}_6$  in the presence of  $\text{H}_2\text{SO}_4$  gave 75% *Et* ester, b.  $156\text{--}0^\circ$ , m.  $33\text{--}5^\circ$ . Passage of  $\text{HCl}$  into I in  $\text{EtOH}$  at reflux gave 100% its *Et* ester, m.  $75\text{--}6^\circ$ . Heating 0.28 g.  $\text{KOH}$ , 1.8 ml.  $\text{H}_2\text{O}$ , 1.15 g.  $4,3\text{-Br}(\text{O}_2\text{N})\text{C}_6\text{H}_3\text{CHO}$  (semicarbazone, m.  $211\text{--}2^\circ$ ) and 0.03 g.  $p\text{-MeOC}_6\text{H}_4\text{OH}$  3 hrs. at  $118\text{--}20^\circ$  gave 53%  $3,4\text{-O}_2\text{N}(4\text{-MeOC}_6\text{H}_4\text{O})\text{C}_6\text{H}_3\text{CHO}$ , m.  $62\text{--}3^\circ$ ; semicarbazone, m.  $201\text{--}2^\circ$ .  $m\text{-HOOC}_6\text{H}_4\text{CH}_2\text{OMe}$  (II) treated with  $\text{Na}$  in  $\text{C}_6\text{H}_6$ , followed by  $4,3\text{-Br}(\text{O}_2\text{N})\text{C}_6\text{H}_3\text{CO}_2\text{Me}$  and heating 12 hrs. at reflux gave 77.3%  $4,1,3\text{-(3-MeOCH}_2\text{C}_6\text{H}_4\text{O})\text{C}_6\text{H}_3(\text{NO}_2)_2$ , undistillable, yellow oil. II (21 g.) added to 8.5 g.  $\text{KOH}$  in 25 ml.  $\text{MeOH}$ , freed of  $\text{MeOH}$  and treated with 1 g. fresh powd.  $\text{Cu}$  and  $p\text{-BrC}_6\text{H}_4\text{CH}_2\text{CO}_2\text{Me}$  at  $140\text{--}5^\circ$  2.5 hrs. gave 35%  $4\text{-(3-MeOCH}_2\text{C}_6\text{H}_4\text{O})\text{C}_6\text{H}_3\text{CO}_2\text{Me}$ , b.  $180\text{--}2^\circ$ , d.  $1.1471$ ,  $n_D^{20}$   $1.5539$ ; the carbonyl analog, b.  $184\text{--}6^\circ$ , d.  $1.1307$ ,  $n_D^{20}$   $1.5465$ . Similarly was prepd. 92%  $3,4\text{-O}_2\text{N}(3\text{-MeOCH}_2\text{C}_6\text{H}_4\text{O})\text{C}_6\text{H}_3\text{CO}_2\text{Me}$ , undistillable yellow oil. II Na salt and I gave 90%  $3,5,4\text{-(O}_2\text{N})_3(3\text{-MeOCH}_2\text{C}_6\text{H}_4\text{O})\text{C}_6\text{H}_3\text{CO}_2\text{Me}$ , m.  $97\text{--}8^\circ$ .  
G. M. Kosolapoff

*GORBACHEVA, I.N.*

USSR/Organic Chemistry. Synthetic Organic Chemistry.

G-2

Abs Jour: Referat Zhur-Khimiya, No 4, 1958, 11334.

Author : Gorbacheva, I.N., Varnakova, L.P., Monich, N.V., Polyachenko, V. M., Romanova, A. S., Tul'chinskaya, L.S., and Shvartsverg, M.S.

Inst :

Title : Synthesis of Substituted 1-Benzyl-3,4-dihydroisoquinolines

Orig Pub: Zhur Obschey Khim, 27, No 8, 2276-2282 (1957)

Abstract: The acylation of 4-hydroxyphenylacetic acid (I) or of its ester (II) and the condensation of II with  $\text{CH}_3\text{OCH}_2\text{Cl}$  in  $\text{CH}_3\text{OH}$  in the presence of  $\text{CH}_3\text{ONa}$  or the condensation of I with  $\text{ClCOOCH}_3$  in alkaline solution have been used to synthesize derivatives of I of the type  $p\text{-ROC}_6\text{H}_4\text{CH}_2\text{COOR}'$  (IIIa-e) (R, R', the yield in %, and the mp in  $^\circ\text{C}$  or bp in  $^\circ\text{C}/\text{mm}$  are given below): (a)  $\text{COCH}_3$ ,  $\text{CH}_3$ , 70, 139-140/4; (b)

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USSR/Organic Chemistry. Synthetic Organic Chemistry.

G-2

Abs Jour: Referat Zhur-Khimiya, No 4, 1958, 11334.

$\text{COC}_6\text{H}_5$ ; H, 92.4, 154-155 (from  $\text{CH}_3\text{OH}$ ); (c)  $\text{COC}_6\text{H}_5$ ,  $\text{CH}_3$ , 68.3, 61-62 (from alcohol); (d)  $\text{CH}_3\text{OCH}_3$ ,  $\text{CH}_3$ , 66.6, 120-123/1; (e)  $\text{COOCH}_3$ , H, 82.7, 96-97 (from benzene). III b, d, and e, of the methyl ester of 3,4-dimethoxy-5-bromophenylacetic acid, and 4-chloro or 4-nitrophenylacetic acid have been converted to  $\beta$ -(3-methoxy-4-benzoyloxy)-phenylethylamides (IV) of (the yield in  $\beta$  and the bp in  $^\circ\text{C}$  are given): 4-benzoyloxy- (IVa), 73.4, 142-143 (from alcohol); 4-methoxymethoxy- (IVb), 23.6, 96-97 (from 80% alcohol); 4-carbomethoxy- (IVc) 41, 102-104 (from ethyl acetate); 3,4-dimethoxy-5-bromo-, 34.2, 125-127 (from alcohol); 4-chloro-, 72, 124-125 (from  $\text{CH}_3\text{CH}$ ) or 4-nitrophenylacetic acid (IVd), 51.7, 132-133 (from alcohol). IVb, c, and d are cyclized by the action of

Card : 2/3

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USSR/Organic Chemistry. Synthetic Organic Chemistry.

Abs Jour: Referat Zhur-Khimiya, No 4, 1958, 11334.

$\text{POCl}_3$  and  $\text{PCl}_5$  in  $\text{CHCl}_3$  or by the action of  $\text{POCl}_3$  in toluene to the hydrochlorides (HC) of 1-(4-methoxymethoxybenzyl)- (58, 205-207 $^\circ$ ), 1-(4-carbomethoxybenzyl)- (86, 146-147), and 1-(4-nitrobenzyl)-6-methoxy-7-benzyl-oxy-3,4-dihydroisoquinoline (85, 205-207); similarly 1-(3-bromo-4-methoxybenzyl)- (HC, mp 207-208 $^\circ$  (decom)); picrate, mp 185-186 (decom)) and 1-(3,4-dimethoxy-5-bromobenzyl)-6-methoxy-7-benzyl-oxy-3,4-dihydroisoquinoline (picrate, mp 193-194 $^\circ$ ) are obtained [TN: from what?]. IVa on cyclization is converted to the HC of 1-phenyl-6-methoxy-7-benzyl-oxy-3,4-dihydroisoquinoline (mp 212-213 $^\circ$ ). The reaction of IIIa and c with  $\beta$ -(3-methoxy-4-benzoyloxy)-phenylethylamine instead of the expected amides of 4-acetoxy- and 4-benzoyloxyphenylacetic acid gives  $\beta$ -(3-methoxy-4-benzoyloxy)-phenylethylamides of acetic and benzoic acids.

Card : 3/3

GORBACHEVA, I.N.

GORBACHEVA, I.N.; BUSHBEN, G.V.; VARNAKOVA, L.P.; SHULOV, L.M.; PRIMOBRASHEN-  
SKIY, N.A.

Synthesis of the methyl ether of the racemic alkaloid dauricine.  
Zhur. ob. khim. 27 no.8:2297-2301 Ag '57. (MIRA 10:9)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii.  
(Alkaloids)

AUTHORS: Gorbacheva, I. N., Lerner, M. I., 79-12-35/43  
Zapesochnaya, G. G., Varnakova, L. P.,  
Preobrazhenskiy, N. A.

TITLE: Investigations in the Field of the Synthesis of the  
Alkaloid Magnolamine (Issledovaniye v oblasti sinteza alkaloida  
Magnolamina).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 12,  
pp. 3353-3357 (USSR)

ABSTRACT: On the basis of the investigations conducted by the  
authors, the formula I was proposed for magnolamine in this  
paper. By a complete synthesis it was possible to establish  
the structure of this alkaloid definitively. In the present  
investigation it was succeeded to produce the basic inter-  
mediate product of the synthesis of the dimethylether of  
magnolamine. By means of a condensation of the dichlorine  
anhydride of the 3,4 - dimethyloxy - 4,6 - dicarboxymethyl  
diphenylether (formula II) with - (3 - methoxy - 4 -  
benzyloxy) - phenylethylamine (formula III) the diamide  
was obtained (formula IV) the simultaneous closing of the  
two isoquinoline rings lead to the dichloric hydrate of the  
3,4 - dimethoxy - 4",6' - [ bi - (6 - methoxy - 7 - benzyl-

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Investigations in the Field of the Synthesis of the Alkaloid  
Magnolamine

79-12-35/43

oxi) - 3,4 dihydro - isoquinolyle] - dimethylphenylether (formula V). A further hydration, a methylation and a removal of the benzyl residua must lead to the dioxymethyl-ether of the magnolamine. The 3,4 - dimethoxy - 4',6 - dicarboxymethyldiphenylether (formula II) was produced by two methods. The further reaction process is represented by the formulae VI, VII, VIII, and IX. From this it appears, that a basic intermediate product of the synthesis of the dimethylether of the alkaloid magnolamine has been synthesized. There are 6 references, 2 of which are Slavic.

ASSOCIATION: **Moscow Institute of Fine Chemical Technology**  
(Moskovskiy institut tonkoy khimicheskoy tekhnologii).

SUBMITTED: August 21, 1956

AVAILABLE: Library of Congress

Card 2/2

1. Magnolamine - Synthesis
2. Alkaloids - Synthesis

AUTHORS: Gorbacheva, I. N., Nikolayeva, L. A., 79-12-39/43  
Preobrazhenskiy, N. A.

TITLE: Methods for the Synthesis of the Alkaloid Daurizine  
(Puti sinteza alkaloida Dauritsina).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 12,  
pp. 3367-3370 (USSR)

ABSTRACT: The synthesis of the methylether of the racemic alkaloid daurizine was realized by a simultaneous juncture of two isoquinoline cycles, starting from the corresponding diamide, with a subsequent hydration and methylation of the secondary nitrogen atom (see formulae I and II). Another synthesis consists of the interaction of two benzyltetrahydroisochinoline derivatative (formula VII), with the formation of an ether bond of the two benzyl residua. In the present investigation, the synthesis of the chlorine hydrate of 1 - (4' - benzyloxy) - benzyl - 2 - methyl - 6,7 - dimethoxy - 1,2,3,4, - tetrahydroisoquinoline (formula VII, R = CH<sub>2</sub>C<sub>6</sub>H<sub>5</sub>, X = B<sub>1</sub>) is conducted. The benzyl group of the latter is removed by a catalytic process by a hydration and by the chlorine hydrate of the 1 - (3' - bromide - 4' - methoxy) - benzyl

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Methods for the Synthesis of the Alkaloid Daurizine

79-12-39/43

- 2 - methyl - 6,7 - dimethoxy - 1,2,3,4, - tetraisoquinoline (formula VII,  $R = CH_3$ ,  $X = Br$ ) according to the scheme given here. The chlorine anhydride of the corresponding phenyl acetic acid (IV,  $R = CH_2C_6H_5$ ,  $X = H$  and IV,  $R = CH_3$ ,  $X = Br$ ) was condensed with  $\beta$ - (3,4 - dimethoxy) - phenylethylamine (III). The amide obtained (V,  $R = CH_2C_6H_5$ ,  $X = H$  and V,  $R = CH_3$ ,  $X = Br$ ) was closed by an action of phosphorous pentachloride with the formation of a dihydroisoquinoline derivative (VI,  $R = CH_2C_6H_5$ ,  $X = H$  and VI,  $R = CH_3$ ,  $X = Br$ ) which was further subjected to a catalytic hydration and methylation with formalin in the presence of acetic acid. (VII,  $R = CH_2C_6H_5$ ,  $X = H$  and VII,  $R = CH_3$ ,  $X = Br$ ). The scheme given here has the purpose of arriving at the synthesis of the optically active isomers of the alkaloid daurizine. There is 1 references, 1 of which is Slavic.

Card 2/3

Methods for the Synthesis of the Alkaloid Daurizine

79-12-39/43

ASSOCIATION: **Moscow Institute of Fine Chemical Technology**  
(Moskovskiy institut tonkoy khimicheskoy tekhnologii).

SUBMITTED: November 26, 1956

AVAILABLE: Library of Congress

1. Daurizine - Synthesis
2. Alkaloids - Synthesis

Card 3/3

AUTHORS: Tsvetkov, Ye. N., Gorbacheva, I. N., 79-12-40/43  
Preobrazhenskiy, N. A.

TITLE: Methods for the Synthesis of the Alkaloid Isochondodendrine  
(Puti sinteza alkaloida Izokhondodendrina).  
Cyclo - di - (4 - [3' - ( $\beta$  - aminoethyl) - phenoxy] -  
Phenylacetyl (Tsiklo - bis - (4 - [3' - ( $\beta$  - aminoetil) -  
fenoksi] - fenilatsetil).

PERIODICAL: Zhurnal Obshchey Khimii, , 1957, Vol. 27, Nr 12,  
pp. 3370-3375 (USSR)

ABSTRACT: Isochondodendrine (I of the given scheme) may be counted  
to the macrocyclic di-benzyltetrahydroisoquinoline alkaloids,  
which show diversified and interesting physiological  
properties. A scheme for the synthesis of this alkaloid and of  
its dimethylether (II) is proposed. The basic initial reaction  
consists of the intramolecular cyclisation of the amide  
(VIII a), which is supposed to lead to to the formation of  
the macrocyclic diamide (IX a). This substance may then be  
transformed into the isochondodendrine (I) or into its dimethyl-  
ether (II). An interpretation of the structure of the macro-  
cyclic system by means of the intramolecular cyclization  
appears to be more appropriate to the authors compared with the

Card 1/2

Methods for the Synthesis of the Alkaloid

79-12-40/43

Isochondodendrine .

Cyclo - di - (4 - [3' - ( $\beta$ -aminoethyl - phenoxy] - phenylacetyl

bimolecular condensations, which were proposed earlier for the synthesis of such compounds. The method proposed here is proved experimentally by the synthesis of the cyclo di - (4(3' - ( $\beta$ -aminoethyl)-phenoxy) - phenylacetyl (IX) (see the complete scheme). On the basis of the cyclization of the diamide (IX) according to Bishler, and of the subsequent hydration two compounds were isolated, which probably possess the formula (X). The existence of two varieties is explained by the two unsymmetric hydrocarbons. There are 6 references, 2 of which are Slavic.

SUBMITTED: November 1, 1956

AVAILABLE: Library of Congress

1. Isochondodendrine - Synthesis
2. Alkaloids - Synthesis

Card 2/2

GORBACHEVA, I. N.

79-1-35/63

AUTHORS: Gorbacheva, I. N. , Varnakova, L. P. , Kleyner, Ye. M.,  
Chernova, I. I. , Preobrazhenskiy, N. A.

TITLE: The Synthesis of the Racemic Methyl Ether of o,o-Dibenzyl-  
magnolin (Sintez ratsemicheskogo metilovogo efira o,o-diben-  
zilmagnolina)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol.28, Nr 1, pp.167-169 (USSR)

ABSTRACT: The alkaloid magnolin (formula I,  $R = R' = H$ ) was liberated  
together with magnolamine (reference 1) from the leaves of  
the Caucasian magnolia (*Magnolia fusata* of the family Magno-  
liaceae), in the year 1958. The structure of magnolin was de-  
termined by the oxidation decomposition of its trimethylether  
(reference 2) (I,  $R = R' = CH_3$ ). On that occasion 1-keto-6,7-  
-dimethoxy-2-methyltetrahydroisoquinoline and 2-methoxy-5,4'-  
-dicarboxydiphenylether were separated. The position of the  
free hydroxyl groups was determined by oxidation of the tri-  
ethylether of the alkaloid. On the basis of these investiga-  
tions the formula (I,  $R = R' = H$ ) was suggested for magnolin.  
The authors for their part realized the synthesis of the di-  
chlorohydrate of 2'-methoxy-5',4'-[bis-(6-methoxy-7-benzyl-

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79-1-35/63

The Synthesis of the Racemic Methyl Ether of o,o-Dibenzylmagnolin

oxy-2-methyl-1,2,3,4-tetrahydro)-isoquinolyl] dimethyl-diphenyl-  
ether (II), which can after removal of the benzyl residue be  
converted to the (+) methylether of magnolin (I, R =H, R'-CH<sub>3</sub>).  
As initial product for the synthesis the author used the di-  
chloroanhydride of 2-methoxy-5,4'-dicarboxymethyl-diphenyl-  
ether (III) and β-(3-methoxy-4-benzyloxy)-phenylamine (IV),  
where the diamide (V) is produced in the presence of potash.  
Under the influence of pentaphosphorus chloride the latter is  
converted to the bisdihydroisoquinoline derivative (VI) which  
is furthermore subjected to a catalytic hydrogenation and  
methylation by means of formaldehyde in the presence of for-  
mic acid. There are 3 references, all of which are Slavic.

ASSOCIATION: **Moscow Institute for Fine Chemical Technology imeni M.V. Lomonosov**  
(Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni  
M. V. Lomonosova)

SUBMITTED: November 24, 1956

AVAILABLE: Library of Congress

Card 2/2 1. Chemistry 2. Methyl esters 3. Enzymes

20131

S/181/61/003/002/029/050  
B102/B212

9,4300 (and 1035, 1143)

AUTHORS: Il'in, V. Ye. and Gorbacheva, I. Ye.

TITLE: Effect of heat treatment on electric and galvanomagnetic properties of indium antimonide

PERIODICAL: Fizika tverdogo tela, v. 3, no. 2, 1961, 535-544

TEXT: This paper reports on experimental investigations which have been done to study the effect of heat on electric and galvanomagnetic properties of polycrystalline n and p-type InSb (carrier concentration  $3 - 4 \cdot 10^{15} \text{ cm}^{-3}$ ). The cubic samples have not only been etched with CP-4 (SR-4) when made but also after each heat treatment. All samples have been heated up to  $300-500^\circ\text{C}$  (60hr) and then slowly cooled off to room temperature. The heating was done in quartz ampoules filled with spectroscopically pure argon. The temperature dependence of the Hall constant R has been measured at  $H = 5000 \text{ oe}$  over a temperature range of  $90 - 400^\circ\text{K}$ . Fig. 1 shows  $R(1/T)$  curves for p-type InSb and Fig. 2

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Effect of heat treatment...

S/181/61/003/002/029/050  
B102/B212

those for n-type InSb. It has been found that the electric conductivity as a function of the inverse temperature was less dependent on the type of conductivity than the Hall constant. The p-type samples showed, before and after heat treatment at 350 and 400°C, with increasing  $1/T$  a rapidly dropping  $\sigma$ , and a flat minimum which was followed by a slow increase; a sample which had been heated to 500°C first showed a steep and then a weaker drop (no minimum). The n-type specimens showed only a minimum when not heated, and those heated showed a more or less distinct break instead of a minimum.  $R$ ,  $\sigma$ , and the resistance variation  $\Delta R/R_0$  ✓

have also been studied in a magnetic field as a function of  $H$  at room temperature and liquid- $O_2$  temperature,  $H$  ranging from 300-11,000 oe and

in some cases also to 20,000 oe. The results are shown in Figs. 5-9. Furthermore, the effect of magnetic fields with 320, 2600, 5000, and 8000 oe on the curves  $R(1/T)$ ,  $\sigma(1/T)$ , and  $\Delta R/R_0 = f(1/T)$  has been studied

for temperatures ranging from 90 to 400°K. For the majority of the n-type InSb specimens the  $R(1/T)$  curves were the same for all fields which had been applied before and after heat treatment. The effects of  $H$  on various curves of the p-type specimens have been more than once  
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Effect of heat treatment...

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B102/B212

described in the literature. The heat treatment did not show a real effect on the shape of the curves. However,  $\sigma(1/T)$  and  $\Delta Q_H/Q_0 = f(1/T)$  of n-type InSb showed a distinct field dependence, especially the latter curves (s. Figs. 12 and 13). The following data have been obtained for  $R_0$  and the mobility ratio:

temperature of heat treatment	n-type 0.85 $R_0$ $\text{cm}^2/\text{v}\cdot\text{sec}$	p-type $\mu_n/\mu_p$
no heat treatment	100,000	130
350°C	54,000	11
400	-	6
450	19,000	-
500	9,500	5

Unusual high activation energies of impurities of 0.011 and 0.06 ev have been found for n-type InSb. They may be calculated with the formula

$\Delta E = m^* e^4 / 2 \epsilon^2 h^2$ , where  $m^*$  is the effective carrier mass,  $e$  the electron

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Effect of heat treatment...

S/181/61/003/002/029/050  
B102/B212

charge,  $\epsilon$  the dielectric constant, and the values calculated are 0.009 and 0.062 ev. If n-type InSb is heated to about 500°C it will approach the p-type and it is possible that under certain conditions a junction will take place. There are 14 figures, 3 tables, and 7 references: 4 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Gosudarstvennyy opticheskiy institut im. S. I. Vavilova  
Leningrad  
(State Optical Institute imeni S. I. Vavilov, Leningrad)

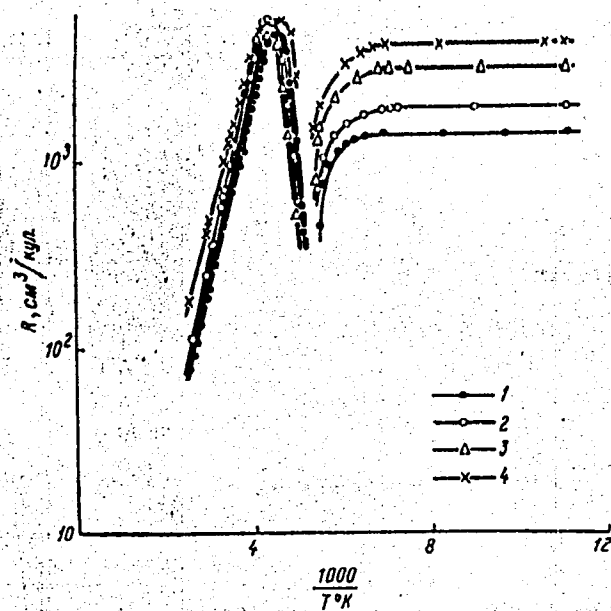
SUBMITTED: June 7, 1960

Card 4/10

20131

Effect of heat treatment...

S/181/61/003/002/029/050  
B102/B212



Card 5/10

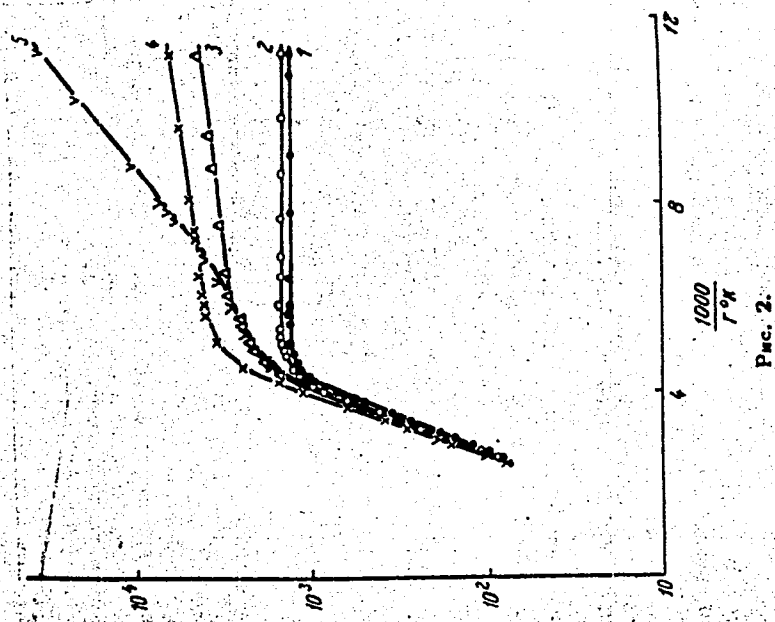
Рис. 1.

Effect of heat treatment...

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Effect of heat treatment...

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B102/B212

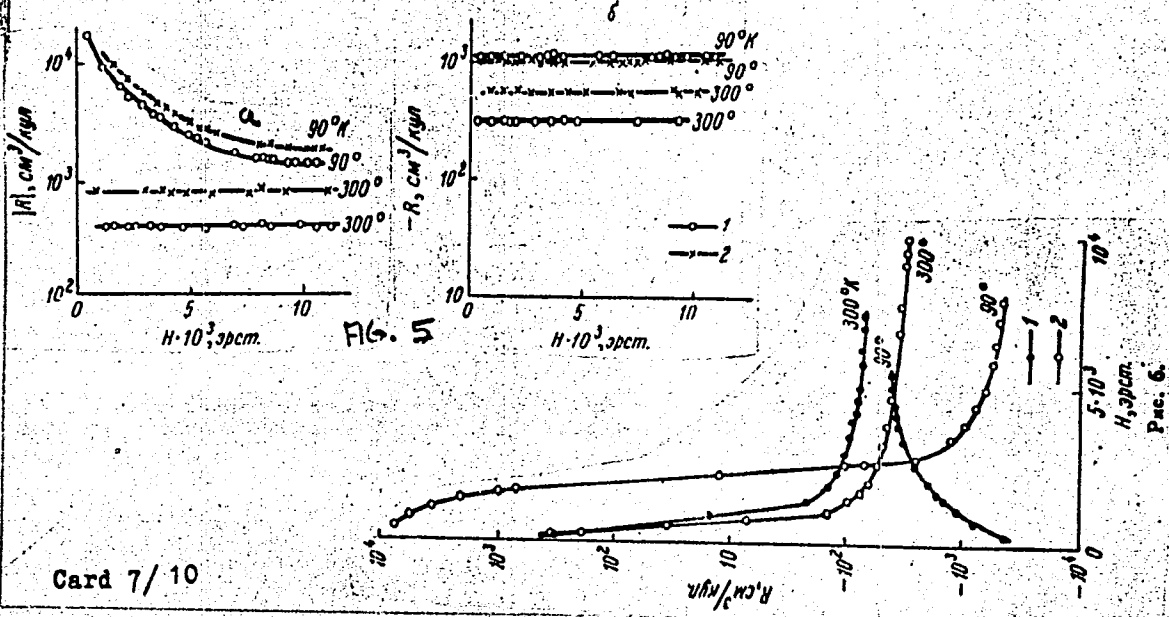


FIG. 5

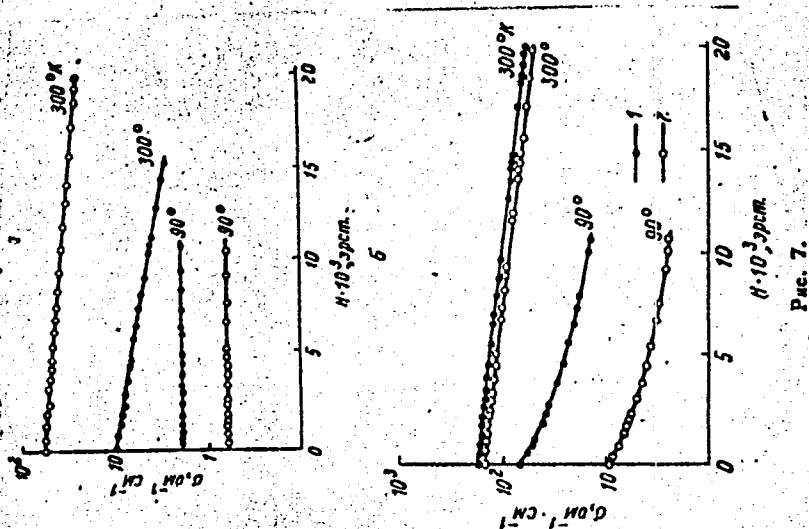
Рис. 6

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Effect of heat treatment...

S/181/61/003/002/029/050  
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Effect of heat treatment...

S/181/61/003/002/029/050  
B102/B212

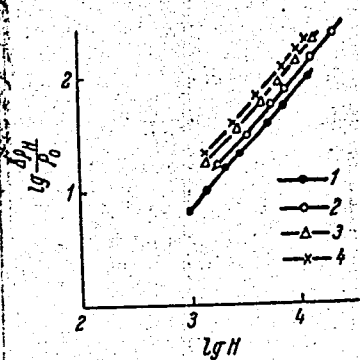


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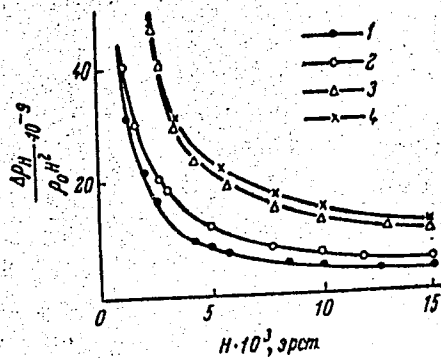


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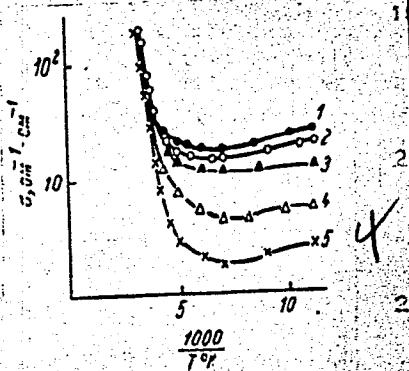


Рис. 12.

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Effect of heat treatment...

S/181/61/003/002/029/050  
B102/B212

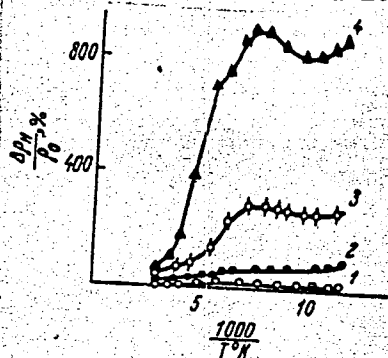


Рис. 13.

Таблица 1

1 Температура отжига, °C	2 Концентрация носителей тока, см <sup>-3</sup>	
	4 р-тип	5 n-тип
До отжига . .	4.1 · 10 <sup>15</sup>	4.1 · 10 <sup>15</sup>
300	—	3.8 · 10 <sup>15</sup>
350	2.9 · 10 <sup>15</sup>	—
400	1.9 · 10 <sup>15</sup>	1.3 · 10 <sup>15</sup>
450	—	8.8 · 10 <sup>14</sup>
500	1.4 · 10 <sup>15</sup>	1.7 · 10 <sup>14</sup>

Таблица 2

1 Температура отжига, °C	3 Удельная электропровод- ность, ом <sup>-1</sup> · см <sup>-1</sup>	
	4 р-тип	5 n-тип
До отжига .	4.8	65
300	—	43
350	3.1	9.2
400	2.6	—
450	—	3.6
500	0.64	0.35

Card 10/10



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surface area of proteins that had absorbed hydrophobic substances. (I. A. Irburin and I. M. Gushchik, I.A. N. Khkh Institute, Moscow). *Doklady Akad. Nauk S.S.S.R.* 82, 842-4 (1952).—Films of pure egg albumin or horse-serum albumin were treated with a hydrophobic substance (Sudan III) and altered, and the surface pressure of the soln. was detd. after addn. of 5%  $(\text{NH}_4)_2\text{SO}_4$  (pH 5.7 with egg albumin) or acetate buffer (pH 4.70 for serum protein); in the region of 0.75-1.0 dyne/cm. the curves are reversible and reproducible. For egg albumin the curve is displaced toward greater area (about 1.5-fold increase of the surface of the monolayer) with retention of 2 plateaus characteristic of phase changes in the protein. Plot of  $\pi$  against  $F_1$  indicates mol. wt. in the monolayer about 48,000 initially and 100,000 after uptake of Sudan III. Serum albumin shows a similar 1.5-2 (0-fold) area increase and nearly identical mol. wt.

(I. W. Kowalski)

GORBACHEVA, L.B.

Chemical Abst.  
Vol. 48 No. 8  
Apr. 25, 1954  
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③  
Protein-lipid complexes and their properties. G. A. Deborin and L. B. Gorbacheva (A. N. Bakh Inst. Biochem., Acad. Sci. U.S.S.R., Moscow). *Biokhimiya* 18, 618-26 (1963).—Globules of egg albumin absorb varying quantities of ergosterol depending upon temp. of the protein soln. A protein-sterol complex is formed at 37-45° consisting of 1 mole of ergosterol and 2 moles of egg albumin. These complexes do not undergo denaturation. It is assumed that the structure and properties of the produced complexes are similar to native protein-sterol complexes. B. S. L.

Gorbacheva, L.B.

U.S.S.R.

The surface films of the gliadins of rye with wheat homopolymer. V. L. Krasovskiy, G. A. Oshegorin, A. A. Rimol, L. B. Gorbacheva, and V. R. Karapetian (A. N. Bakh Inst. of Acad. Sci., U.S.S.R., Moscow and Inst. Genetics, Acad. Sci., U.S.S.R., Bishkek). *Zerna, Akad. Nauk S.S.S.R., Sbornik 2*, 140-6 (1954).—The surface films of rye grains found in wheat ears were studied. The mol. wt. of gliadin from wheat of rye is 30,000. The mol. wt. of the specimens taken from the "altered" grains is but 15,000; this material also shows significantly greater limiting area in formation of a monolayer, than is the case for the normal wheat or rye. Thus, the formation of these grains is accompanied by a severe alteration of the protein structure.

G. M. Kosolapoff



Gorbacheva, L.B.

Complexes of proteins with lipides and their properties.  
The effect of pH and of guanidine on the stability of the complex of egg albumin with ergosterol. G. A. Pichurin and L. B. Gorbacheva (A. N. Bakh Biochem. Inst., Acad. Sci. USSR, Moscow). Doklady Akad. Nauk S.S.S.R. 93, 317-30(1954); cf. C.A. 48, 4067f. The determining factor in the stability of egg albumin complex with ergosterol is the pH of the soln. The 2:1 mol. complex studied by the surface-layer technique shows max. stability when the underlying medium has pfl 4-5; other pH values lead to rapid disocn. The stability range is close to the isoelec. point of the protein; the same phenomenon is observed also in bulk soln. as well as in the surface film. The equil. system of the complex is reversible but requires considerable activation for attainment of reversibility in the usual sense; thus prolonged agitation and temp. rise are usually necessary for reformation of the complex after changes in pH. Addn. of guanidine-HCl does not cleave the complex provided the pfl is maintained by a buffer. G. M. K.

GORBACHEVA, L. B. Cand Biol Sci -- (diss) "Morphological changes <sup>in</sup> globular  
proteins <sup>during</sup> ~~caused by~~ denaturation." Mos, 1957. 19 pp 20 cm. (Inst of Biochemistry  
im A. N. Bakh, Acad Sci USSR), 110 copies (KL, 24-57, 116)

-20-

**GONRACHEVA, L.B.; BRESLER, S.Ye.; FRENKEL', S.Ye.**

**Morphological changes in proteins and denaturation phenomena.**  
**Biokhimiia 22 no.1/2:70-83 Ja-F '57. (MLRA 10:7)**

1. Institut biokhimiia im. A.N.Bakha (Moskva) i Institut vysoke-  
molekulyarnykh soyedineniy Akademii nauk SSSR (Leningrad).  
(BLOOD PROTEINS,  
morphol.changes & phenomena of denaturation (Rus))

**AUTHORS:** Znamenskaya, M. P., Gorbacheva, L. B. SOV/ 20-120-3-39/67

**TITLE:** Self-Oxidation of Reserve Proteins Enriched With Hydrogen  
(O samookislenii zapasnykh belkov, obogashchennykh vodorodom)

**PERIODICAL:** Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 3, pp.577-580  
(USSR)

**ABSTRACT:** In previous investigations of the first mentioned author it was proved that the reserve proteins of the seeds themselves can serve as reducing agents for oxidizing substances as  $KJO_2$ ,  $K_2Fe(CN)_6$ ,  $J_2$  and others, if they are enriched with hydrogen by reduction (Ref 1). The second author proved the same for 2 - 6 dichlorophenol - indophenol and methylene blue (Table 1). It was interesting to determine the magnitude of the reducing effect of such proteins with respect to oxygen, as in the living cell protein substances can occur in to a varying degree reduced state in different stages of development of the cells and therefore can participate in the respiration of the cell because of a binding with atmospheric oxygen. As in earlier investigations the authors used reserve proteins: glycinin from soja beans, legumin from peas and edestin from hemp seeds (produced according to Osborn).

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